

American Chain and Cable Company  
400 block of East Princess Street,  
seven blocks from Colonial Square  
York  
York County  
Pennsylvania

HAER No. PA-52

HAER  
PA.  
67-YORK,  
16-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Survey  
National Park Service  
Department of the Interior  
Washington, D. C. 20240

HISTORIC AMERICAN ENGINEERING RECORD  
PA-52

HAER  
PA,  
67-YORK,  
16-

TO: HISTORIC AMERICAN ENGINEERING RECORD  
FROM: CONTINENTAL WINGATE COMPANY  
DATE: NOVEMBER 1, 1979  
SUBJECT: RECORDATION OF THE FORMER  
AMERICAN CHAIN AND CABLE COMPANY PROPERTY

THE PROPERTY

LOCATION: IN THE 400 BLOCK OF EAST PRINCESS STREET, SEVEN  
BLOCKS FROM COLONIAL SQUARE, WITHIN THE CITY OF  
YORK, PENNSYLVANIA.

DATE OF  
CONSTRUCTION: 1916

PRESENT OWNER: YORK AREA DEVELOPMENT CORPORATION  
118 NORTH GEORGE STREET  
YORK, PENNSYLVANIA 17401

PRESENT USE: MOSTLY EMPTY, SOME TEMPORARY STORAGE.

SIGNIFICANCE: FOR ALMOST SIXTY YEARS THESE STRUCTURES WERE A MAJOR  
MANUFACTURING CENTER FOR A LARGE VARIETY OF CHAIN  
PRODUCTS, INCLUDING NEW TECHNIQUES OF WELDED AND  
WELDLESS PRODUCTS.

CONSULTANT: PAUL F. MILLER

### HISTORY

IN 1916 THE WEED CHAIN "TYRE" GRIP COMPANY WAS MERGED INTO THE AMERICAN CHAIN COMPANY, INC. THE WEED COMPANY HAD BEEN THE FIRST MANUFACTURER OF TIRE CHAINS. THE GROWING BUSINESS NEEDED LARGER FACILITIES AND IN 1916 THE LARGE NEW CHAIN PLANT WAS BUILT IN YORK, THE SUBJECT SITE.

IN 1917, AMERICAN CHAIN COMPANY, INC., PURCHASED THE STANDARD CHAIN COMPANY FROM J. C. SCHMIDT OF YORK. SCHMIDT HAD BEEN THE FIRST TO USE AN ELECTRIC WELDER AND A MECHANICAL FORMER TO MAKE CHAIN, IN THE 1890'S. THE NEW PLANT WAS REFERRED TO AS THE "ELECTRIC WELDING PLANT", EVEN THOUGH OTHER MANUFACTURING FUNCTIONS OCCURRED THERE. THE ELECTRIC WELDING PLANT (ALSO CALLED THE "UPPER PLANT") WAS THE NATION'S LARGEST CENTER OF TIRE CHAIN MANUFACTURING.

THE NAME "AMERICAN CHAIN AND CABLE COMPANY, INC.", ORIGINATED WITH THE ACQUISITION OF THE AMERICAN CABLE COMPANY OF NEWARK, NEW JERSEY IN 1936. AS EARLY AS 1917, THE AMERICAN CHAIN COMPANY ADVERTISED ITSELF NATIONALLY AS THE LARGEST MANUFACTURER OF CHAIN IN THE WORLD.

THE NEW PLANT IN YORK WAS COMPLETED IN TIME FOR THE COMPANY TO CONTRIBUTE A LARGE VARIETY OF CHAIN FOR THE WORLD WAR I EFFORTS OF AMERICA AND ITS ALLIES. THE SITE HAD PREVIOUSLY BEEN A LIMESTONE QUARRY, BUT HAD BEEN FILLED IN AS A DUMP SITE. NO STRUCTURES, THEREFORE, PRE-DATED THE EXISTING STRUCTURES ON THE SITE. THE FACING MAP LOCATES THE SUBJECT AREA WITHIN THE YORK COMMUNITY.

TO THE EAST OF THE PROJECT AREA IS THAT PART OF THE ORIGINAL COMPLEX WHICH IS STILL USED BY AMERICAN CHAIN AND CABLE COMPANY, INC. (NOW ACCO INDUSTRIES) FOR MANUFACTURING, WAREHOUSING AND OFFICE PURPOSES. THESE BUILDINGS PRE-DATE THE BUILDINGS OF THE PROJECT AREA.

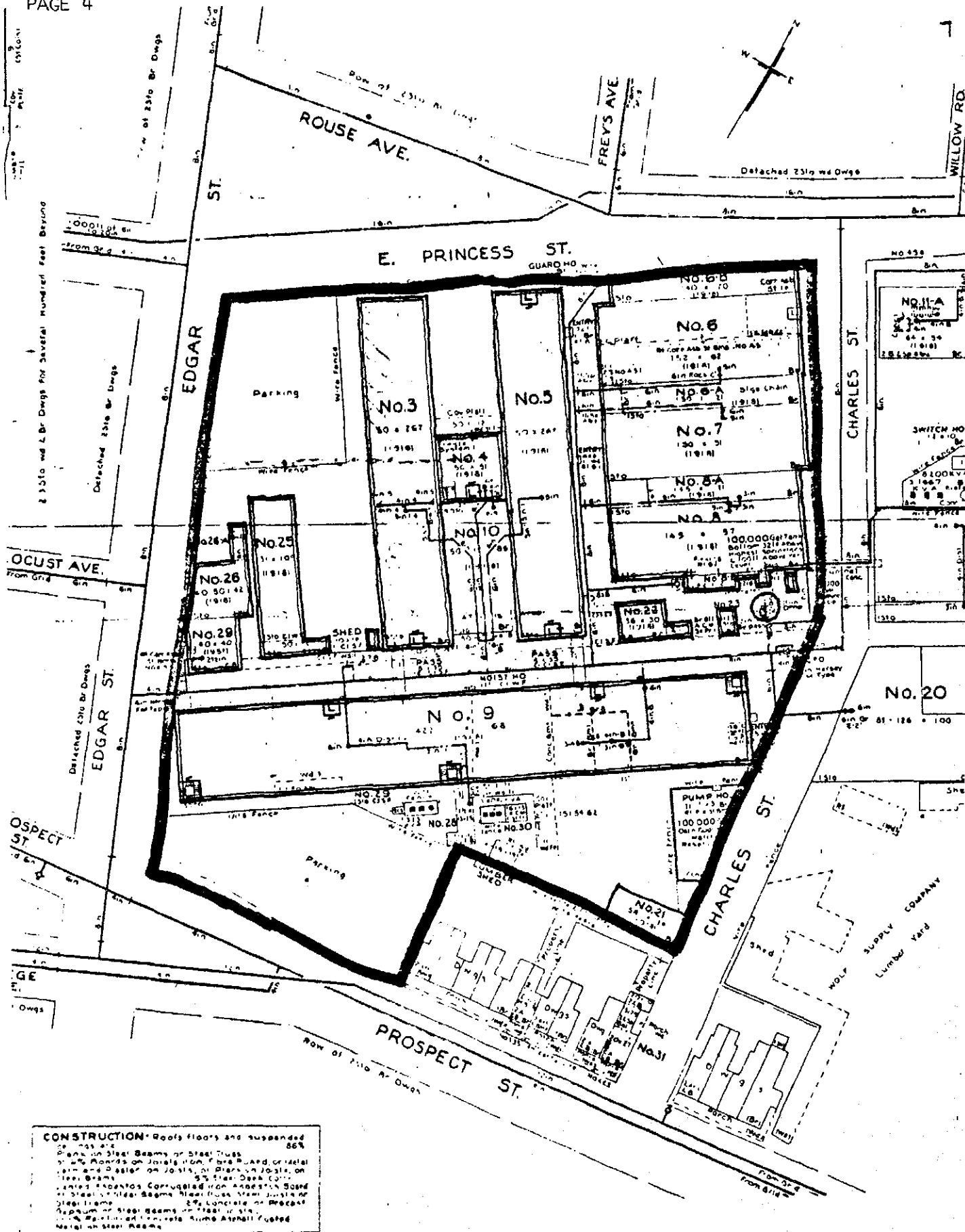
MANUFACTURING OPERATIONS CEASED WEST OF CHARLES STREET IN 1975, AFTER APPROXIMATELY SIXTY YEARS OF CONTINUOUS OPERATIONS. SINCE 1975, THIS COMPLEX HAS BEEN USED ONLY FOR STORAGE BY ACCO INDUSTRIES. FOR MORE THAN A YEAR ACCO ATTEMPTED TO SELL THE PROPERTY FOR SOME OTHER BUSINESS -- MANUFACTURING PURPOSE, BUT NO SERIOUS PURCHASOR WAS FORTHCOMING.

AT THE TIME IN 1977 THAT ACCO WAS CONTEMPLATING DEMOLITION OF THE COMPLEX WEST OF CHARLES STREET, THE YORK HOUSING REHABILITATION CORPORATION NEGOTIATED WITH ACCO AND TOOK OVER OWNERSHIP.

THE MAP ON THE FOLLOWING PAGE IDENTIFIES THE VARIOUS BUILDINGS OF THAT PORTION OF THE ORIGINAL SITE WHICH IS SCHEDULED FOR DEMOLITION OR REUSE.

BECAUSE OF THE VARIETY OF CHAIN MANUFACTURED WITHIN THE SUBJECT BUILDINGS, THE MANUFACTURING PROCESS INVOLVED A COMPLICATED FLOW OF PARTS AND FUNCTIONS BETWEEN THE SEVERAL BUILDINGS. AMONG THE VARIETY OF CHAIN PRODUCTS, SIX TYPES WERE BASIC:

- I. TIRE CHAINS (WELDED), BOTH SIDE AND CROSS CHAIN.



SOURCE: AMERICAN CHAIN COMPANY

EXISTING SITE PLAN  
YORK PA. REUSE HOUSING LSA 1040  
SCALE = 1" = 100'

2. TNSO ("TENSO") (WELDLESS), REPRESENTED BY DOG CHAIN, AND OTHER USES.
3. LOCK LINK (WELDLESS), FOR LIFTING AND OTHER LIGHT MECHANICAL OPERATIONS.
4. JACK CHAINS (WELDLESS), A KNOTTED, NOT LOOPED, CHAIN FOR LOW STRENGTH USE.
5. SASH CHAIN (WELDLESS) FOR MOVEMENT OF WINDOWS AND OTHER SIMILAR, LIGHT LIFTING.
6. SMALL MACHINE CHAINS (WELDED), USED IN A LARGE VARIETY OF FUNCTIONS, INCLUDING THEIR COMMON USE IN MACHINERY.

WHAT FOLLOWS IS A DESCRIPTION OF THE MANUFACTURING PROCESSES THAT OCCURRED IN TEN OF THE PRINCIPAL BUILDINGS IN THE COMPLEX OWNED BY Y.H.R.C. NINE OF THE TEN BUILDINGS (BUILDING #9 IS THE EXCEPTION) ARE SCHEDULED TO BE DEMOLISHED.

BUILDING 9: RAIL TRACKS PARALLELED THE NORTH SIDE OF THIS STRUCTURE, AND, AT DOCK HEIGHT. MOST OF THE TRACKAGE HAS SUBSEQUENTLY BEEN FILLED UP TO WHAT ONCE WAS DOCK HEIGHT.

STEEL WIRE WAS SHIPPED BY RAIL TO YORK FROM THE ROD MILL OF (PAGE STEEL AND WIRE CO.) AMERICAN CHAIN AND CABLE COMPANY IN MONESSEN, PENNSYLVANIA (PITTSBURGH AREA). THIS WIRE WAS

BUILDING 9: (CONTINUED)

STORED IN THE FIRST FLOOR OF BUILDING 9. THE WIRE MOVED UP TO THE SECOND FLOOR, BY ELEVATOR, FOR FORMING INTO THE TIRE CHAIN COMPONENTS (CUTTING, BENDING, FORMING, LACING).

ON THE THIRD FLOOR THE TIRE CHAIN WAS WELDED, AND THEN PASSED INTO BUILDINGS 3 AND 5 THROUGH AN ENCLOSED BRIDGE, AT THE THIRD FLOOR LEVEL.

THE PARTIAL BASEMENT OF BUILDING 9 WAS USED FOR PATTERN STORAGE. THESE PATTERNS WERE MADE ON PREMISE.

BUILDING 6: LARGE ROTARY ATMOSPHERE FURNACES HEAT-TREATED THE CROSS CHAINS FOR TIRE CHAINS. A PIT FURNACE HEAT-TREATED THE SIDE CHAINS FOR TIRE CHAINS.

BUILDING 6-A:

THIS BUILDING IS SIMPLY THE ENCLOSED PASSAGEWAY BETWEEN BUILDINGS 6 AND 7. WITHIN 6-A, THE CHAIN WAS PLATED WITH BRASS AND ZINC BY A MECHANICAL ("PEAN") PROCESS.

BUILDING 7: PEAN PLATING FOR HOOKS USED IN TIRE CHAINS (THIS PROCESS WAS LATER DROPPED WITH THE INTRODUCTION OF COATED WIRE).

DRY AND WET TUMBLING OF CHAIN FOR CLEANING ALSO TOOK PLACE IN THIS BUILDING. DRY TUMBLING WAS DONE WITH SHOT-LIKE PARTICLES.

BUILDING 7: CONTINUED

WET TUMBLING WAS DONE WITH ALKALI AND WITH ACID. A LARGE  
OVERHEAD BELTED DRIVE SHAFT POWEREO THE TUMBLERS.

BUILDING  
8-A:

AN ENCLOSED PASSAGEWAY THAT ORIGINALLY SEPARATED BUILDINGS 7  
AND 8. BUILDING 8-A WAS USEO FOR STORAGE, AS A FOREMEN'S OFFICE  
AND FOR THE RECTIFIERS, EQUIPMENT THAT CONVERTED ALTERNATING  
CURRENT TO DIRECT CURRENT FOR ZINC-ELECTRO-PLATING.

BUILDING 8: WASTE TREATMENT VATS WITHIN BUILDING 8 SEPARATED OUT THE ALKALI  
AND ACIO USED IN THE "WET TUMBLING" IN BUILDING 7.

ZINC-ELECTRO-PLATING OF CHAIN TOOK PLACE IN SEVERAL LARGE  
TANKS. THE OVERHEAD CRANE FED THE RACKS OF CHAIN INTO THE TANKS.

BUILDING  
22:

STORAGE OF SAWOUST USED FOR ORYING CHAIN. LATER USED FOR OFFICES.

BUILDING 3: 5TH FLOOR: MACHINE SHOP

4TH FLOOR: CUTTING AND ASSEMBLING CHAIN

3RD FLOOR: CUTTING CROSS CHAIN FOR TIRE CHAINS INTO LENGTHS

2NO FLOOR: FORMING OF LOCK LINKS

1ST FLOOR: WAREHOUSING OF FINISHED TIRE CHAINS

THE METAL, WINDING CHUTE FROM THE FOURTH TO THE FIRST FLOOR IN  
BUILOING 3 CARRIED CLOTHBAGS OF TIRE CHAINS.



BUILDING

10: MACHINE SHOP MOVED HERE FROM THE FIFTH FLOOR OF BUILDING 3.

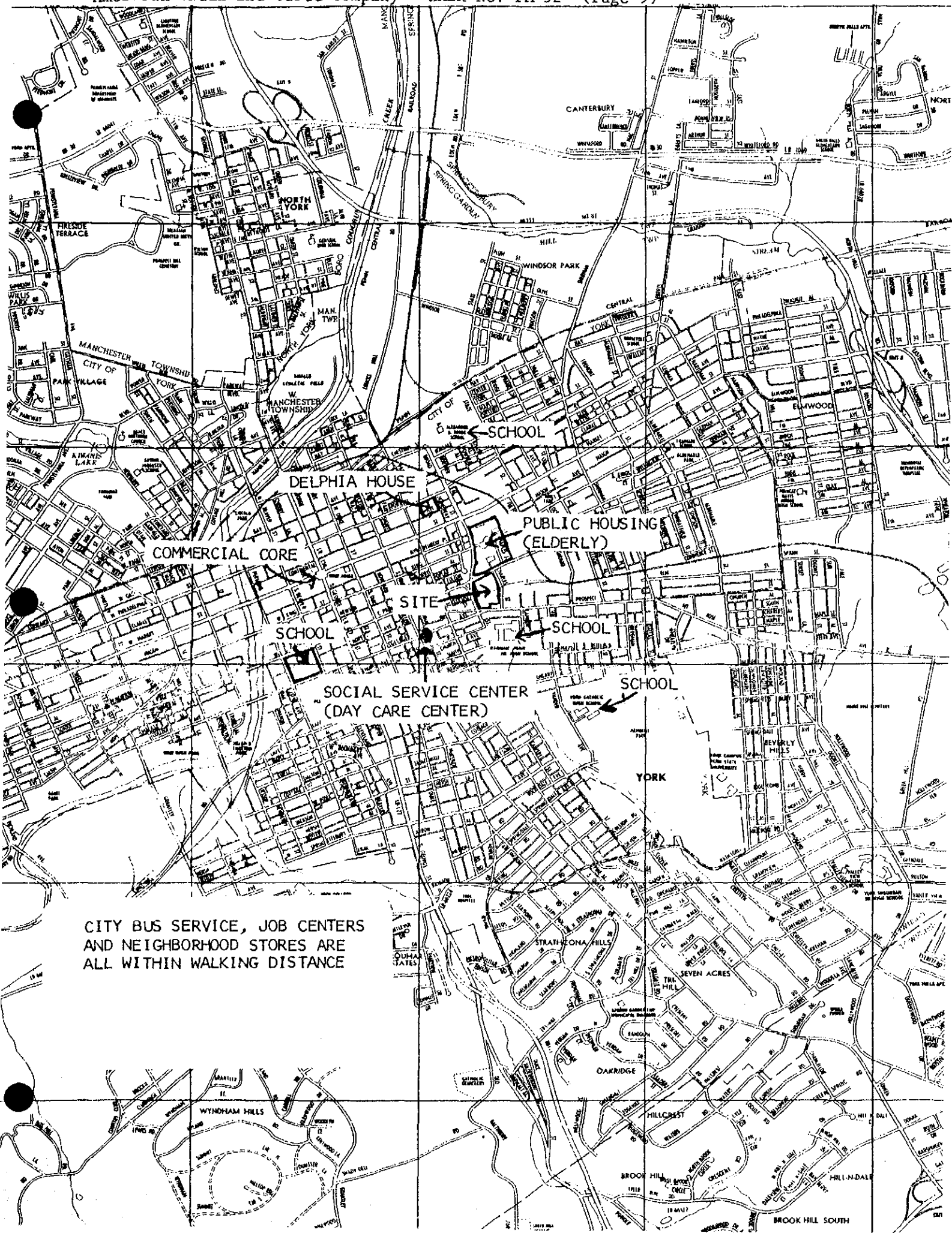
BUILDING 5: 5TH FLOOR: STOREROOM AND THE MANUFACTURE OF CLOTH BAGS FOR  
TIRE CHAINS, INCLUDING PRINTING OF THE BAGS.  
4TH FLOOR: ASSEMBLY OF LARGE TRUCK AND TRACTOR CHAINS.  
3RD FLOOR: TWISTING OF TIRE CHAIN.  
2ND FLOOR: FORMING OF "TNSO" AND "JACK" CHAIN.  
1ST FLOOR: ASSEMBLY AND PACKAGING OF MISCELLANEOUS CHAIN,  
NOT INCLUDING TIRE CHAIN.

THE METAL, WINDING CHUTE FROM THE FOURTH FLOOR TO THE FIRST  
FLOOR OF BUILDING 5 CARRIED EMPTY STEEL DRUMS, EMPTIED OF  
CONTENTS DURING THE MANUFACTURING PROCESS ON THE UPPER FLOORS.

x x x x x x x x x x

THE IMPORTANCE OF THE UPPER PLANT OF ACCO IS DIRECTLY RELATED TO TIRE  
CHAINS AND THE DEVELOPMENT OF THE AMERICAN AUTOMOBILE INDUSTRY. AT THE TURN  
OF THE CENTURY HARRY D. WEED OF CANASTOTA, NEW YORK, HAD GIVEN TRACTION TO HIS  
AUTOMOBILE BY WRAPPING WILD GRAPE VINE AROUND THE WHEELS. FROM THIS EXPERIENCE  
MR. WEED INVENTED AND THEN MANUFACTURED TIRE CHAINS.

THIS BUSINESS WAS PURCHASED BY WALTER B. LASHAR IN 1905, WHICH DATES THE  
BEGINNING OF WHAT EVENTUALLY BECAME THE AMERICAN CHAIN AND CABLE COMPANY.  
THE NEWLY INVENTED TIRE CHAIN WAS COMBINED WITH ELECTRIC WELDING IN THE PLANT  
BUILT IN 1916 IN YORK, PENNSYLVANIA.



REFERENCES

HISTORICAL FILES OF ACCO INDUSTRIES, INC.  
EAST PRINCESS STREET, YORK.

INTERVIEWS WITH MESSRS. JOHN CLAYHOLD, CHARLES FLAHERTY AND CHARLES ARVIN  
OF ACCO, EAST PRINCESS STREET, YORK. AN INTERVIEW WITH MR. JOHN THIEBAUTH,  
RETIRED FROM ACCO.

LIBRARY OF THE HISTORICAL SOCIETY OF YORK COUNTY.

"THE STORY OF A DYNAMIC COMMUNITY", NARRATION BY HOWARD NIMHOFF,  
PUBLISHED BY THE YORK CHAMBER OF COMMERCE, 1946.